

*Davisia cobbi*, sp. n. (Figs. 9, 10.)

Shell suborbicular, white, irregularly concentrically striate; umbones large, prominent; dorsal margin sloping on both sides; ventral margin gently rounded; both anterior and posterior sides sloping abruptly; cardinal tooth in right valve small, slightly curved; anterior lateral slightly elongate, weak; posterior lateral rather broadly expanded; cardinal tooth in left valve obsolete; anterior lateral expanded, curved below; posterior lateral rather broad, elongate, straight; interior of shell pure white, shining.

Long. 2.5, lat. 2.25 mm.

*Hab.* Falkland Islands.

The proper position of this and the preceding genus would appear to be in the family of the Erycimidæ.

*Psephis foveolata*, sp. n. (Fig. 11.)

Shell small, broadly subtrigonal, smooth, polished, shining, anteriorly pale flesh-colour, shading to livid purple posteriorly; umbones large, prominent; dorsal margin sloping on both sides; ventral margin rather straight; anterior side produced, rounded; posterior side still more produced, somewhat truncate; interior of shell shining, showing the external coloration through the shell.

Long. 3.5, lat. 5 mm.

*Hab.* Falkland Islands.

## EXPLANATION OF PLATE IV.

- Fig.* 1. *Limnæa brunneoflavida*, sp. n.  
*Fig.* 2. *Chilina falklandica*, sp. n.  
*Fig.* 3. *Photimula solidula*, sp. n.  
*Fig.* 4. *Modiolarca gemma*, sp. n.  
*Fig.* 5. — *picturata*, sp. n.  
*Fig.* 6. *Cyamium iridescens*, sp. n.  
*Fig.* 7. Hinge of *Malvinasia arthuri*, sp. n.  
*Fig.* 8. *Malvinasia arthuri*, sp. n.  
*Fig.* 9. Hinge of *Davisia cobbi*, sp. n.  
*Fig.* 10. *Davisia cobbi*, sp. n.  
*Fig.* 11. *Psephis foveolata*, sp. n.

XV.—*A new Indian Species of Musca.*

By ERNEST E. AUSTEN.

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AMONG some Indian Muscidæ recently received for identification from Captain W. S. Patton, M.B., I.M.S., Assistant Director of the King Institute of Preventive Medicine,

Guindy, Saidapet, South India, are three specimens of a species of *Musca*, which, although already represented in the British Museum Collection, appears to be undescribed. Though not, of course, a blood-sucking fly in the ordinary sense of the term, the species, as will be seen from Captain Patton's note on its habits, which is printed below, may quite conceivably play a part in the dissemination of micro-organisms pathogenic to animals, and it is therefore well that it should receive a name without delay. This new *Musca*, then, which I have much pleasure in naming in honour of its gifted discoverer, may be characterized as follows:—

*Musca pattoni*, sp. n.

♂ ♀.—Length, ♂ (14 specimens) 5·6 to 8·5 mm., ♀ (3 specimens) 6·8 to 7·8 mm.; width of head, ♂ 2·4 to 3 mm., ♀ 2·8 mm.; width of front of ♀ at vertex 1 mm.; length of wing, ♂ 5·4 to 7·6 mm., ♀ 6·25 mm.

*Eyes in ♂ almost in contact in centre of front, separated by little more than greatest width of stoutest thoracic macrochaeta, sides of face in ♂, and of lower part of front, viewed from above, brilliantly white; front in ♀ of moderate width, its sides (parafrontals) each at least half as broad, or more than half as broad, as frontal stripe; thorax bronze-black, greyish or yellowish grey pollinose, dorsum longitudinally striped as in Musca domestica, L., median grey stripe brighter in front; abdomen ochraceous-buff\* or buff, with shimmering yellowish pollinose patches, and on dorsum a clove-brown or black median stripe, at least on second and third segments, and a more or less conspicuous and often triangular clove-brown mark on apex of fourth segment; in ♀ extreme hind margins of second and third segments also clove-brown on dorsum; wings hyaline; legs black.*

*Head:* ground-colour blackish, grey (whitish grey or pearl-grey) pollinose, sides of front (parafrontals) in ♀ with a slight yellowish tinge, distinctly grey right up to vertex when viewed somewhat from behind, posterior orbits conspicuous above (yellowish grey) in ♀, but disappearing above in ♂; occiput black; *frontal stripe* black, in ♀ decidedly narrower than in ♀ of *M. domestica*, L., its sides but slightly curved; *palpi* and *proboscis* clove-brown, hairs on labella yellowish; first and second joints of *antennae* black or blackish, third joint clove-brown, shimmering grey

\* For names and illustrations of colours, see Ridgway, 'A Nomenclature of Colors for Naturalists' (Boston: Little, Brown, & Company, 1886).

or yellowish grey, elongate, relatively narrower and distinctly longer than in *M. domestica*, arista (except buff band beyond thickened portion) and its hairs clove-brown; all hairs and bristles on head, as also on body and legs, black. *Thorax*: dark stripes on dorsum narrower in ♀ than in ♂, in which sex the two dark stripes on each side of the median grey stripe are sometimes more or less confluent; median grey stripe on dorsum usually decidedly broader than each admedian dark stripe; scutellum sometimes entirely yellowish grey pollinose, but when viewed from behind often showing a bronze-black apical spot, which may be prolonged into a broad median longitudinal stripe. *Abdomen*: bright, shimmering, yellowish pollinose patches on dorsum not visible on first segment, but on three following segments very conspicuous when viewed from certain directions, and varying in shape according to the angle from which they are seen; second and third segments each with a longitudinally elongate rectangular pollinose patch on each side of dark median stripe; on fourth segment these patches coalesce into one; a transversely elongate, semi-rectangular or partially ovate pollinose patch on each side of second, third, and fourth segment; latero-ventrally these lateral patches curve round and reach the inner ventral edges of the dorsal scutes; extreme base of dorsum of first segment, beneath scutellum, clove-brown or black, in ♂ connected by a clove-brown mark with median stripe on second segment; median stripe usually only about half as wide on third as on second segment, and often somewhat expanded on anterior margin of latter; hind border of third segment, a larger or smaller area on each side of this segment, and whole of fourth segment sometimes more or less infuscated in ♂; dark mark on apex of fourth segment sometimes connected with anterior margin, thus forming a continuation of median stripe; hypopygium of ♂ blackish, greyish pollinose. *Alar squama* in ♂ cream-coloured, *thoracic squama* in ♂ cream-buff; *squamæ* in ♀ waxen white. *Legs*: coxæ, posterior surface of front femora, and a streak on under side of middle femora, bright grey pollinose.

India and Ceylon: types of ♂ and ♀ and one other ♀ from Guindy, Saidapet, South India, 1909 (*Captain W. S. Patton, I.M.S.*); eight additional ♂♂ from India, precise locality uncertain (presented by the *Bombay Natural History Society*); three ♂♂ and one ♀ from Trincomali, Ceylon, 21. viii., 7 and 18. ix., and 9. x. 1890 (*Lt.-Col. Yerbury*); one ♂ from the vicinity of the 19th milestone on the Kandy Road, Ceylon,

22. x. 1890 (*Lt.-Col. Yerbury*) ; and one ♂ from Colombo, Ceylon, October 1898 (*E. E. Green*).

The types of both sexes are in the British Museum (Natural History).

Writing on November 1st, 1909, with reference to *Musca pattoni*, Captain Patton said :—"This species breeds in cow-dung, and its pupa is *dirty white*. The fly has peculiar habits, in that it sucks the blood which oozes from the bites inflicted on cattle by *Hæmatopota* and other Tabanids, *Stomoxys*, and *Philæatomyia*. It likewise sucks the juice out of the vaccine vesicles on calves, and also the blood after the vesicles are scraped."

From *Musca domestica*, L. (syn. *M. determinata*, Walk.), *M. pattoni* can be distinguished, *inter alia*, by its usually larger size, stouter habit of body, much narrower front in the male, the greater breadth of the sides of the front in the female, and the more sharply defined median stripe on the abdomen in both sexes. The fact that the first segment of the abdomen is in both sexes for the most part ochraceous-buff or buff, instead of entirely or for the most part black or bronze-black, will serve to distinguish *Musca pattoni* from *M. corvina*, Fabr., and other species closely allied thereto. From *Musca nebulosa*, Fabr.,—which, according to Captain Patton, is "the common *Musca* of Madras, breeds in horse-dung and other refuse, particularly in night-soil, and has a reddish-brown pupa,"—*M. pattoni* differs, *inter alia*, in its much larger size, in the front of the male being only half or less than half as wide, and in the presence of the clove-brown mark on the apex of the fourth abdominal segment. In *M. nebulosa* the fourth segment of the abdomen, or at least its apex, is entirely pale.

#### XVI.—On some Points in the Nomenclature of Echinoids.

By Dr. TH. MORTENSEN.

THE nomenclature of Echinoids has received considerable attention of late years, and a great number of publications dealing more or less extensively with problems relating thereto have appeared. Unfortunately the result of these discussions has been by no means a general agreement on these questions among specialists. It is true that recently most of the authors seem to have come to an agreement on some important points; but now Lambert and Thiery, in their 'Essai de nomenclature raisonnée des Échinides' and